



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/829,684	04/10/2001	Steffen Hofacker	Mo-6019/LeA33,933	9248
157	7590	03/30/2004	EXAMINER	
BAYER POLYMERS LLC 100 BAYER ROAD PITTSBURGH, PA 15205			AHMED, SHEEBA	
			ART UNIT	PAPER NUMBER

1773

DATE MAILED: 03/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

91

<b>Office Action Summary</b>	<b>Application No.</b> 09/829,684	<b>Applicant(s)</b> HOFACKER ET AL.	
	<b>Examiner</b> Sheeba Ahmed	<b>Art Unit</b> 1773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 October 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 15, 18, 19 and 22-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 15, 18, 19, and 22-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Amendment*

1. Claim 15 has been amended in the above-identified application. Claims 16, 17, 20 and 21 have been cancelled. **Claims 15, 18, 19, and 22-24 are now pending.**

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 15, 18, 19, and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. (US 6,319,594 B1).

Suzuki et al. recite a film comprising a transparent substrate film, a transparent conductive layer containing gold, nickel, ATO, ITO and zinc oxide/aluminum oxide (*corresponding to the zinc-oxide layer of the claimed invention*) and a low refractive hardcoat layer (*corresponding to the abrasion-resistant outer layer of the claimed invention*) (Column 2, lines 6-12). The transparent substrate film may be polyamide, polypropylene, polymethyl methacrylate, or polycarbonate (*corresponding to the transparent plastic layer of the claimed invention*) (Column 2, lines 56-67). The transparent conductive layer comprises conductive fine particles such as zinc oxide embedded in a curing resin such as an organosilicon compound (*hence the Examiner takes the position that the zinc oxide particles are inherently surface modified by*

***the organosilicon compound which surrounds the zinc oxide particles***). Examples of such organosilicon compounds include glycidoxypropyltrimethoxysilane (Column 3, lines 4-65 and Column 4, lines 24-35). Example 1 shows that the low refractive hard coat layer may be formed by a SiO<sub>2</sub> sol. The fine particles may have a particle diameter of 1 to 50 nm (Column 6, lines 54-55). The film disclosed by Suzuki et al. has a hardness that is high enough to not cause deterioration caused by a scratch and can prevent reflection of outdoor light (***hence meeting the limitations of claim 23***). In addition, an adhesive or primer layer may be provided on the transparent substrate (***thus meeting the limitations of claim 24***) (Column 7-8, lines 64-67 and 1-5).

Suzuki et al. do not specifically state that zinc oxide is the preferred fine particle in the conductive layer.

However, Suzuki et al. show that gold, nickel, ATO, ITO and zinc oxide are equivalent fine particles known in the art. Therefore, because these particles were art-recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to choose any one of them.

### ***Response to Arguments***

3. Applicant's arguments filed on October 31, 2003 have been fully considered but they are not persuasive. Applicants traverse the rejection of claims 15, 18, 19, and 22-24 under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. (US 6,319,594 B1) and submit that Suzuki does not disclose zinc oxide particles and rather teaches zinc oxide/aluminum oxide particles. The Applicants argue that Suzuki does not meet the

Art Unit: 1773

limitations of the instantly claimed invention given that zinc oxide/aluminum oxide is a composite material wherein the aluminum oxide can not be removed and further given that the instant application claims "... a zinc oxide coating, wherein the coating consists essentially of zinc oxide nanoparticles...". However, the Examiner disagrees. The transitional phrase "consisting essentially of" limits the scope of a claim to the specified materials or steps "and those that do not materially affect the basic and novel characteristic(s)" of the claimed invention. *In re Herz*, 537 F.2d 549, 551-52, 190 USPQ 461, 463 (CCPA 1976). A consisting essentially of' claim occupies a middle ground between closed claims that are written in a consisting of' format and fully open claims that are drafted in a comprising' format." *PPG Industries v. Guardian Industries*, 156 F.3d 1351, 1354, 48 USPQ2d 1351, 1353-54 (Fed. Cir. 1998). See also *Atlas Powder v. E.I. duPont de Nemours & Co.*, 750 F.2d 1569, 224 USPQ 409 (Fed. Cir. 1984); *In re Janakirama-Rao*, 317 F.2d 951, 137 USPQ 893 (CCPA 1963); *Water Technologies Corp. vs. Calco, Ltd.*, 850 F.2d 660, 7 USPQ2d 1097 (Fed. Cir. 1988). For the purposes of searching for and applying prior art under 35 U.S.C. 102 and 103, absent a clear indication in the specification or claims of what the basic and novel characteristics actually are, "consisting essentially of" will be construed as equivalent to "comprising." See, e.g., *PPG*, 156 F.3d at 1355, 48 USPQ2d at 1355. In this case, the recitation "... a zinc oxide coating, wherein the coating consists essentially of zinc oxide nanoparticles..." is interpreted as an open claim (*since there is no clear indication in the specification or claims of what the basic and novel characteristics actually are*) and

Art Unit: 1773

therefore the zinc oxide/aluminum oxide material taught by Suzuki meets the limitations of the above recited claim language.

### ***Conclusion***

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheeba Ahmed whose telephone number is (571)272-1504. The examiner can normally be reached on Mondays and Thursdays from 8am to 6pm.

Art Unit: 1773

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Thibodeau can be reached on (571)272-1516. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sheeba Ahmed  
Art Unit 1773  
March 16, 2004